## Claims

[c1] 1.A composition designed for scavenging sulfur compounds in fluids, wherein said composition comprises a physical mixture of an oxide product and an activator, with said oxide product having a temperature equal to or less than 300 ° C, with said oxide product selected from the group consisting of iron oxide, iron hydroxide, zinc oxide, zinc hydroxide, and combinations thereof, said activator selected from the group consisting of platinum oxides, gold oxides, silver oxides, copper oxides, copper metals, copper carbonates, copper alloys, copper salts, cadmium oxides, nickel oxides, palladium oxides, lead oxides, mercury oxides, tin oxides, manganese oxides, manganese metals, manganese alloys, manganese carbonates, manganese salts, cobalt oxides, and combinations thereof, said activator is present in said composition in an amount equal to from about 0.125% to about 5% by weight of said composition.

[c2] 2.The composition of Claim 1, wherein said activator is present in said composition in an amount equal to from about 0.25% to about 2% by weight of said composition.

[c3] 3.A composition designed for scavenging sulfur compounds in fluids, wherein said composition comprises a physical mixture of an oxide product and an activator, with said oxide product having a temperature equal to or less than 300 ° C, with said oxide product selected from the group consisting of manganese oxide, manganese hydroxide, and combinations thereof, said activator selected from the group consisting of platinum oxides, gold oxides, silver oxides, copper oxides, copper metals, copper carbonates, copper alloys, copper salts, cadmium oxides, nickel oxides, palladium oxides, lead oxides, mercury oxides, tin oxides, cobalt oxides, and combinations thereof, said activator is present in said composition in an amount equal to from about 0.125% to about 5% by weight of said composition.

[c4] 4.The composition of Claim 3, wherein said activator is present in said composition in an amount equal to from about 0.25% to about 2% by weight of said composition.

[c5] 5.A composition designed for scavenging sulfur compounds in fluids, wherein

said composition comprises a physical mixture of an oxide product, and an activator, with said oxide product having a temperature equal to or less than 300 ° C, said oxide product selected from the group consisting of iron oxide, iron hydroxide, and combinations thereof, said activator selected from the group consisting of manganese oxides, manganese metals, manganese alloys, manganese carbonates, manganese salts, and combinations thereof, said activator is present in an amount equal to from about 0.125% to about 5% by weight of said composition.

[c6] 6.The composition of Claim 5, wherein said activator is present in said composition in an amount equal to from about 0.25% to about 2% by weight of said composition.

[c7] 7.A process for the removal of sulfur compounds from fluids, consisting of contacting the sulfur compound contaminated fluid with a composition, which is a physical mixture of iron oxide, iron hydroxide, or combinations thereof, and an activator selected from the group consisting of platinum oxides, gold oxides, silver oxides, copper oxides, copper metals, copper carbonates, copper alloys, copper salts, cadmium oxides, nickel oxides, palladium oxides, lead oxides, mercury oxides, tin oxides, manganese oxides, manganese metals, manganese alloys, manganese carbonates, manganese salts, cobalt oxides, and combinations thereof, wherein the activator is present in the composition in an amount of 0.125% by weight to 5% by weight of the total weight of the composition, and said contacting is conducted at a temperature of 300 ° C or less.

[c8] 8.A process for the removal of sulfur compounds from fluids, consisting of contacting the sulfur contaminated fluid with a composition, which is a physical mixture of iron oxide, iron hydroxide, zinc oxide, zinc hydroxide, or combinations thereof, and an activator selected from the group consisting of copper oxides, copper metals, copper carbonates, copper alloys, copper salts, manganese oxides, manganese metals, manganese alloys, manganese carbonates, manganese salts, and combinations thereof, wherein the activator is present in the composition in an amount of 0.125% by weight to 2% by weight

of the total weight of the composition, and said contacting is conducted at a temperature of 300 ° C or less.

[c9] A process for the removal of sulfur compounds from fluids, consisting of contacting the sulfur compound contaminated fluid with a composition, which is a physical mixture of manganese oxide, manganese hydroxide, or combinations thereof, and an activator, with said activator selected from the group consisting of platinum oxides, gold oxides, silver oxides, copper oxides, copper metals, copper carbonates, copper alloys, copper salts, cadmium oxides, nickel oxides, palladium oxides, lead oxides, mercury oxides, tin oxides, cobalt oxides, and combinations thereof, wherein the activator is present in the composition in an amount of 0.125% by weight to 5% by weight of the total weight of the composition, and said contacting is conducted at a temperature of 300 ° C or less.